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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
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DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/189,098

Applicant
Reinberg

Examiner
Howard Weiss

Group Art Unit
2814



☒ Responsive to communication(s) filed on 5/11/00

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-67 ~~is/are~~ pending in the application.

Of the above, claim(s) 21-31 ~~is/are~~ withdrawn from consideration.

Claim(s) _____ is/are allowed.

☒ Claim(s) 1-20 and 32-67 ~~is/are~~ rejected.

Claim(s) _____ is/are objected to.

☒ Claims 1-67 are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on 5/11/00 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Attorney's Docket Number: 3528US-(97-1099)

Filing Date: 11/9/98

Continuing Data: none

Claimed Foreign Priority Date: none

Applicant(s): Reinberg

Examiner: Howard Weiss

Election/Restriction

1. Applicant's election of Group I, Claims 1 to 20 and Claims 32 to 67, in Paper No. 4 is acknowledged. Claims 21 to 31 are withdrawn from consideration as being for a non-elected invention. The Applicant is requested to cancel the non-elected claims as part of a complete response to this office action. Cancellation of the non-elected claims would not preclude the later filing of a divisional application on the non-elected invention (please see 35 USC 120 and 121).

Drawings

2. The corrected or substitute drawings were received on 5/11/00. These drawings are acceptable.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4, 8, 11, 13, 17, 20, 52, 55, 60, 64 and 67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is improper to use the term "comprising" instead of "consisting of." (Ex parte Dotter, 12 USPQ 382 (Bd. App. 1931; See MPEP §2173.05(h))

Claim Rejections - 35 USC § 102 / 103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Initially, and with respect to Claims 32 to 38, note that a "product by process" claim is directed to the product *per se*, no matter how actually made. See In re Thorpe et al., 227 USPQ 964 (CAFC, 1985) and the related case law cited therein which make it clear that it is the final product *per se* which must be determined in a "product by process" claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. As stated in Thorpe,

even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972); *In re Pilkington*, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969); *Buono v. Yankee Maid Dress Corp.*, 77 F.2d 274, 279, 26 USPQ 57, 61 (2d. Cir. 1935).

Note that Applicant has burden of proof in such cases as the above case law makes clear.

8. Claims 1 to 11, 32 to 38, 56 to 67 are rejected under 35 U.S.C. § 102(e) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Brown et al.

Brown et al. show all aspects of the instant invention (e.g. Figure 4 and Column 8 Lines 3 to 47) including:

- an intermediate conductive layer **12, 22** made of aluminum in electrical contact with a structure **10** of a semiconductor device
- an electrically conductive contact layer **26** in electrical contact with said intermediate conductive layer
- an insulator component **14a, 34** made of resin and enveloped and sandwiched between said intermediate conductive and electrically conductive contact layers

As to the grounds of rejection under section 103(a), how the contact is made does not affect the final device structure. See MPEP § 2113 which discusses the handling of "product by process" claims and recommends the alternative (§ 102 / § 103) grounds of rejection.

The Specification contains no disclosure of either the critical nature of the claimed arrangement or any unexpected results arising therefrom (the Specification only mentions preferred values). Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). Since the Applicant has not established the criticality of the thicknesses stated and since these thicknesses are in common use in similar devices in the art, it would have been obvious to one of ordinary skill in the art to use these values in the device of Brown et al.

9. Claims 12 to 20 and 39 to 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. in view of Ovshinsky et al.

Brown et al. show most aspects of the instant invention (Paragraph 8) except for the semiconductor device having a memory element including a memory cell comprising a phase change material. Ovshinsky et al. teach (e.g. Figure 1) to make a semiconductor device with memory cells **30** with phase change material **36** to produce memory devices with higher switching speeds at reduced energy levels (Column 5 Lines 14 to 20). It would have been obvious to a person of ordinary skill in the art at the time of invention to make a semiconductor device with memory cells with phase change material as taught by Ovshinsky et al. in the device of Brown et al. to produce memory devices with higher switching speeds at reduced energy levels.

Conclusion


10. *Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. Papers should be faxed to Art Unit 2814 via the Art Unit 2814 Fax Center located in Crystal Plaza 4, room 4C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is (703) 308-7722 or -7724. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.*
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Howard Weiss** at **(703) 308-4840** and between the hours of 8:00 AM to 4:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via **Howard.Weiss@uspto.gov**.

Any inquiry of a general nature or relating to the status of this application should be directed to the **Group 2800 Receptionist** at **(703) 308-0956**.

12. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 257/ 530; 438/ 600, 601	6/13/00
Other Documentation: none	
Electronic Database(s): EAST (USPAT)	6/13/00

HW/hw
13 June 2000


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